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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,467	12/22/2000	Kenneth Michael Hyams	81862P186	2405

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EXAMINER

SHEW, JOHN

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/746,467

Applicant(s)

HYAMS ET AL.

Examiner

John L. Shew

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/3/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Thornton et al (Patent No. US 6363065 B1).

Claim 1, Thornton teaches an apparatus comprising a private branch exchange (PBX) switch (PBX 14 in FIG. 1, column 1 lines 7-22), a residential gateway to receive channel associated signals (CAS) from the PBX switch (T1/E1 Transceiver/Framer 270 connecting to the PBX using CAS signaling in FIG. 2, column 12 lines 42-60), a programmable CAS module to convert the CAS signals into signals of another telephony protocol (T1AB software module 575 handling CAS AB bits interaction with the Call Handler 560 for conversion to H.323 protocol module 563 for Voice Over IP in FIG. 5, column 25 lines 5-11, column 27 lines 31-41, column 28 lines 25-46).

Claim 2, Thornton teaches the programmable CAS module further comprises a programmable local call agent finite state machine to interpret events and to output user defined responses (CAS Manager software module 830 of FIG. 5, of the Call Handler

software module 560 of FIG. 8, which interfaces through a Peer Border Element Manager 960 State Machine to interpret events E with defined response actions A of FIG. 10, column 37 lines 31-40).

Claim 3, Thornton teaches a user interface tool to enable a user to create a CAS program file (Web Server user interface 514 capable of software update and testing of T1/E1 framing of FIG. 5, column 25 lines 12-35).

Claim 4, Thornton teaches the CAS program file includes a system section (Call Handler Manager 850 of FIG. 8), an incoming signals section (CAS Manager 830 of FIG. 8), an outgoing signals section (H.323 Manager 820 of FIG. 8), and a state events action section (Peer Border Element Manager 960 with Events and Actions of FIG. 10).

Claims 7, 12, Thornton teaches a method and apparatus comprising allowing a user to define a state, an event or an action of a telephony protocol (FIG.1, FIG. 10, the user interface to set system configuration parameters and invoking internal test procedures such as the Peer Border Element Manager State Machine comprising of events and actions towards establishing VoIP connection referenced by column 22 lines 33-41), downloading the user defined state event or action to a channel associated signal (CAS) engine (user interface downloading of internal operational statistics and software modules wherein the software modules being generic includes the CAS Manager referenced by column 22 lines 33-41), and changing a telephony protocol of the CAS engine corresponding to idle telephone lines associated with the CAS engine based on the user defined state event or action (user interface via a command test library update of the software with execution of the tests for T1/E1 framing which is essential to CAS

signaling with the Peer Border Element Manager operating from the initial Idle state referenced by column 25 lines 5-35, column 27 lines 31-52).

Claims 8, 13, Thornton teaches the telephony protocol is a CAS protocol (T1/E1 links used for CAS signaling referenced by column 27 lines 22-52).

Claims 9, 14, Thornton teaches the state is a transient condition of the CAS engine (Peer Border Element Manager 960 State Machine which is associated to the CAS Manager to establish a VoIP call wherein the states are all transient of FIG. 10).

Claims 10, 15, Thornton teaches the event is an external trigger received by the CAS engine (State 1045 which requires an external Event of a TCP failure being a trigger of FIG. 10).

Claims 11, 16, Thornton teaches the action is a response by the CAS engine to a state-event condition (State 1045 which has an action response of Start Retry Timer of FIG. 10).

Claim 17, Thornton teaches a computer readable medium having instructions embodies thereon (4Mx16 Flash memory module 205 containing program code of FIG. 2, column 15 lines 23-34), which when executed by a processing system (Micro Controller 240 of FIG. 2), causes the system to perform a method comprising allowing a user to define a state, an event or an action of a telephony protocol (the user interface to set system configuration parameters and invoking internal test procedures such as the Peer Border Element Manager State Machine comprising of events and actions towards establishing VoIP connection referenced by column 22 lines 33-41), downloading the user defined state event or action to a channel associated signal (CAS) engine (the user interface

downloading of internal operational statistics and software modules wherein the software modules being generic includes the CAS Manager referenced by column 22 lines 33-41), and changing a telephony protocol of the CAS engine corresponding to idle telephone lines associated with the CAS engine based on the user defined state event or action (the user interface via a command test library update of the software with execution of the tests for T1/E1 framing which is essential to CAS signaling with the Peer Border Element Manager operating from the initial Idle state referenced by column 25 lines 12-35).

Claim 18, Thornton teaches the telephony protocol is a CAS protocol (T1/E1 links used for CAS signaling referenced by column 27 lines 22-52).

Claim 19, Thornton teaches the state is a transient condition of the CAS engine (Peer Border Element Manager 960 State Machine which is associated to the CAS Manager to establish a VoIP call wherein the states are all transient of FIG. 10).

Claim 20, Thornton teaches the event is an external trigger received by the CAS engine (State 1045 which requires an external Event of a TCP failure being a trigger of FIG. 10).

Claim 21, Thornton teaches the action is a response by the CAS engine to a state-event condition (State 1045 which has an action response of Start Retry Timer of FIG. 10).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thornton as applied to claims 1-4 above, in view of Cartwright Jr (Patent No. 6075942).

Claim 5, Thornton teaches a Voice Over IP telephony gateway apparatus comprising of numerous software modules including a CAS manager with a web server user interface for updating software. He does not teach a compiler to generate binary CAS file.

Cartwright Jr. teaches a compiler to generate a binary file from a program file (the computer system 34 to compile a source program into machine code of FIG. 1, Abstract lines 1-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the program compiler of Cartwright to the VoIP gateway Web Server interface of Thornton for the purpose of generating virtual machine code executable on different machines.

Claim 6, Thornton teaches the binary file is downloaded to a module (software update with downloading capability referenced by column 22 lines 32-41, column 25 lines 25-35). Since software is generic, this includes all software modules such as the CAS manager as well as DSP drivers.

Response to Arguments

Applicant's argument over rejection of claim 1 has been fully considered but is not persuasive. Regarding the limitation "a programmable CAS module", the examiner respectfully maintains the rejection. Thornton in Figure 5 presents the structure of Call Processing Software (col. 7 lines 27-30) which includes the T1AB process. The use of the definition of a "process" as defined by Newton's Telecom Dictionary is to present the understanding of a term for one of ordinary skill in the art. The presented Newton definition cites:

"Process A software application. Any activity or systematic sequence of operations that produces a specified result. Typically, a computer function that consists of, or involves, procedure code, data storage and an interface for communication with other processes."

This definition is not inapposite but is consistent with the definition provided by Thornton (col. 21 lines 56-62) which cites:

"We define a 'process' as an independent execution entity of which the system operating system is aware. A process can contend for system resources then controlled by the operating system, such as, e.g., the processor, memory and input/output (I/O) access. A process can be divided into multiple tasks, each of which is a logical entity of which the operating system has no knowledge."

The process is an independent execution entity which is equivalent to a software module or application.

In regards to the limitation "programmable", Thornton (col. 25 lines 5-11) cites:

"As noted above, software updates, such as to a driver or process, can be provided, via user entered telnet commands, through FTP process 529 to the system. Any such update, in the form of replacement code, is written, through use of flash programming module 523, into flash memory 205 (see FIG. 2) and, as such, overwrites a corresponding prior version of the code."

The Flash Memory 205 is the program code for the Gateway including the operation of the T1AB process which is used by the T1/E1 Transceiver Framer 270. This is clarified by Thornton (col. 25 lines 25-31) which cites:

"A user interface is provided, via command and manufacturing test library 575, through which, as discussed above, the user can interact with the gateway, and, e.g., update software through FTP process 529, download log entries, execute various manufacturing tests (such as T1/E1 framing, loopback, LED tests and others), and so forth."

Thus Thornton teaches user software update including T1/E1 framing.

Regarding claim 7, limitation "changing a telephony protocol of the CAS engine", Thornton (col. 27 lines 30-41) cites:

"As noted above, T1/E1 communication links can utilize either channel associated signaling (CAS) or common channel signaling (CCS). T1AB process 575 interacts, through AB bit driver 591, with individual signaling bits A, B provided in CAS and converts the signaling information contained in these bits into a representation usable by the call handler. Process 575, interacting with this driver, also collectively implements a reverse function of converting signaling information provided the call handler into these individual signaling bits. Process 575 and driver 591 are activated only if the T1/E1 link is operated in the CAS mode."

Thornton has priorly taught the user ability to remotely update software. From the above citation, a change to the CAS can be implemented through the selection of operation of the CAS mode which further defines a state of operation. The Peer Border Element Manager 960 uses the settings to implement the telephony protocol to use for the call.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

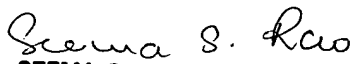
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John L. Shew whose telephone number is 571-272-3137. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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